

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

1. – 17. (Canceled)

18. (Currently Amended) A method of detecting the presence of a pathogen in a sample or disease of an organism in a sample from said diseased organism, said method comprising:

- a) contacting a polypeptide with said sample, wherein said polypeptide comprises an engineered evolved PDZ domain having at least 50% homology 95% identity with SEQ ID NO: 2, wherein said engineered evolved PDZ domain binds to a target associated with said pathogen or disease state in said sample; and
- b) detecting binding of said polypeptide to said target associated with said pathogen or disease in said sample to said sample.

19. – 23. (Canceled)

24. (Previously presented) The method of claim 18 wherein said pathogen is *Bacillus anthracis* or *Clostridium botulinum*.

25. (Previously presented) The method of claim 18 wherein said target is protein BclA of *Bacillus anthracis* or a fragment thereof.

26. (Previously presented) The method of claim 18 wherein said target is a polypeptide having a C-terminal sequence of EFYA.

27. (Canceled)

28. (Previously presented) The method of claim 18 wherein said polypeptide binds to said target with a dissociation constant ( $K_d$ ) of about 100 nM or lower.

Applicant : Simon Delagrange  
Serial No. : 10/584,020  
Filed : November 8, 2006  
Page : 5 of 9

Attorney's Docket No.: 20446-0003US1

29. (Previously presented) The method of claim 18 wherein said polypeptide binds to said target with a dissociation constant of about 15 nM or lower.

30. (Previously presented) The method of claim 18 wherein said polypeptide further comprises a reporter group.